

REMARKS

In response to the Office Action dated May 29, 2009, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1-14 are pending in the present Application. Claims 1, 9, 12 and 13 are amended, leaving Claims 1-14 for consideration upon entry of the present amendments and following remarks.

Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Rejections under 35 U.S.C. §101

Claims 12-14 are rejected under 35 U.S.C. 101 as being allegedly directed to non-statutory subject matter. The rejection is reiterated from the previous Office action dated November 18, 2008.

In response to Applicant's arguments filed February 18, 2009, the instant Office action indicates that such arguments have been fully considered but are not considered persuasive for the reasons set forth on Pages 2 and 3 of the instant Office action.

In particular, the response to arguments states that the client system recited in Claims 12-14 could read on any generic system without particular structures, and there is no apparatus recited in the claims. It is further stated that while "a computer-based server" is recited in Claim 12, there is no particular structures for the server to indicate it is a particular machine. To overcome the rejection, it is suggested in the instant Office action that the claims may be amended to produce a physical transformation or tie to a particular machine or apparatus.

In response, the Applicants have accordingly amended claim 12 to recite, *inter alia*, a "method performed in the client system *which comprises a computer processor*." No new matter has been entered by this amendment. Support may be found, for example, in Claim 9 reciting, *inter alia*, a "computer readable medium for a server-client network system for genotyping

analysis, the *computer readable medium* including computer executable instructions,” where such computer readable medium recited in Claims 9-11 are described throughout the specification and figures as computer processor-implemented programs in a client-server architecture. (See, e.g., page 7, lines 25-32, the client engine 321 of Figure 1 and corresponding description, and page 6, lines 7-12.)

Therefore, Applicants respectfully submit that Claims 12-14 recite proper statutory subject matter pursuant to the provisions of 35 U.S.C. §101. Entry of the claim amendments, reconsideration and withdrawal of the relevant §101 rejections of Claims 12-14 are respectfully requested.

Rejections under 35 U.S.C. §112

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph because the metes and bounds of “receiving test results of a biochip test on the target sample, identifying a biochip used on the target sample...” recited in Claims 1 and 12 are alleged as being unclear. It is further stated that while the “receiving” and “identifying” steps refer to the same target sample, it is unclear whether they refer to the same biochip used for the target sample, if multiple biochips are intended or if the biochip identified in the “identifying” step is the same as that of the “receiving” step.

In response, the Applicants have similarly amended Claims 1 and 12 to recite, *inter alia* “receiving test results of a biochip on the target sample, *identifying the biochip* used on the target sample, and performing the genotyping analysis on the test results *of the biochip*.” Support for the claim amendments is at least found in the specification at page 4, lines 25-27 and page 6, line 1-6.

Applicants respectfully submit that the amendment to Claims 1 and 12 obviates the rejections under 35 U.S.C. 112, second paragraph. Dependent claims 2-7, 13, and 14 are believed to be in compliance with 35 U.S.C. 112, first and second paragraphs at least for the reason that they depend upon 112-compliant base Claims 1 and 12, respectively. Entry of the claim amendments, reconsideration and withdrawal of the relevant 35 U.S.C. 112, second paragraph rejections are respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 1-14 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Osborne et al. (WO 01/16860 A2). Applicants respectfully traverse the rejections for the reasons set forth below.

Independent **Claim 1** recites, *inter alia*:

“a computer-based server including an analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis; and
a client system communicatively coupled to the computer-based server, the client system performing
 downloading the selected analysis algorithm from the analysis algorithm database, and
 performing the genotyping analysis on the test results of the biochip using the downloaded analysis algorithm”

Independent **Claim 9** recites, *inter alia*:

“computer readable medium including computer executable instructions for causing a client system to perform logical operations comprising:
 downloading the selected analysis algorithm from the analysis algorithm database stored on a computer-based server, the analysis algorithm database, and
 performing the genotyping analysis on the test results of the biochip using the downloaded analysis algorithm.”

Independent **Claim 12** recites, *inter alia*:

“the method performed in the client system which comprises a computer processor, the method comprising:
 downloading the selected analysis algorithm from the analysis algorithm database stored on the server, the analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis, and
 performing the genotyping analysis on the test results of the biochip using the downloaded analysis algorithm.”

It is stated that Osborne discloses that the system includes “central processing data facilities” and “user facilities,” and that “each user facility may include an optical scanning system to collect hybridization signals from a nucleic acid array, an image processing system to convert the optical data into a set of hybridization parameters, a connection to a data network, and a user interface to display, manipulate, search and analyze hybridization information,” at page 5, lines 1-6 of Osborne.

As further noted in the instant Office action, Osborne teaches the “user facility” comprises a diagnostic user and a browse user, where the diagnostic user utilizes the system to use gene chips or DNA microarrays, the scanner and/or detector to read the chip data, the memory storage to store the scanned chip data and a PC or other desktop system to search, display, correlate, manipulate and analyze data via a user interface. (See, page 11, lines 19-25 of Osborne.) Osborne teaches at page 11, lines 16-29:

There are two categories of diagnostic users, such as “diagnostic master users” and “diagnostic users”. Accounts for diagnostic master users are authorized and correspond to the user sites where the systems are deployed. These diagnostic master users are allowed to authorize accounts for diagnostic users. For clinical applications, diagnostic users correspond to the individuals that have been tested. For research and development applications, diagnostic master users can designate either individual chip test results or groups of chips as a single diagnostic user, wherein this option lies with the diagnostic master users in order to meet their testing and analysis needs.

Diagnosis processing is a key part of the artificial intelligence system. The diagnosis processing for clinical applications may be different from that of research and development applications. Diagnosis processing for clinical applications implements a rules based analysis application which utilizes a database set of rules and results. Diagnosis processing thereby determines which conditions apply to the various combinations of gene expression levels and personal medical history. For example, a

In the instant Office action, the “central processing facilities” are considered as the “server” of the claimed invention. The “user facilities,” inclusive of the “accounts for diagnostic (master) users corresponding to the user sites where systems are deployed” are considered as the “client system” of the claimed invention.

It is then asserted that since the accounts for diagnostic (master) users correspond to the user sites where systems are deployed, it is clear that for a diagnostic (master) user, i.e. client, to perform the diagnosis processing, the user first receives (i.e., downloads) the systems because they “are deployed,” and the “system” included databases of rules, etc., which are interpreted as “analysis algorithms” of the claimed invention.

Osborne teaches the central data processing facility includes a Web, Database, Application and Operations server, for example, at page 5, lines 12-22, page 7, lines 6-15 and page 13, line 16 to page 14 and in Figure 1. Applicants find no suggestion or teaching in Osborne of the Web, Database, Application or Operations server as including “databases of rules” so as to teach the “analysis algorithms” of the claimed invention, and especially *storing* such databases of rules, so as to teach the “analysis algorithms” of the claimed invention. Therefore, Osborne *does not teach or suggest* **a computer-based server including an analysis algorithm database storing a plurality of analysis algorithms for the genotyping analysis of independent Claims 1, 9 and 12.**

Additionally “deploy” is commonly defined as “to arrange in a position of readiness, or to move strategically or appropriately.” (deploy. (n.d.). *Dictionary.com Unabridged (v 1.1)*. Retrieved July 10, 2009, from Dictionary.com website: <http://dictionary.reference.com/browse/deploy>) The term “deploy” implies nothing of what or who performs the action of “deploy.”

As discussed above, the rejection details of the instant Office action assert that “it is clear that for a diagnostic (master) user, i.e. client, to perform the diagnosis processing, the user first *receives (i.e., downloads)* the systems *because they [the systems] “are deployed.”* In response to Applicant’s arguments, it is then concluded on Page 11 of the instant Office action that it would have been obvious that if systems are deployed, they [the systems] must have been provided to the users. Applicants respectfully disagree for the reasons set forth below.

Firstly, the “deployed” system includes “central processing data facilities” (including Web, Database, Application or Operations servers) and “user facilities/diagnostic users,” as defined by Osborne. Notwithstanding that Osborne does not teach or suggest the Web, Database, Application or Operations server including the stored “databases of rules” so as to teach the “stored analysis algorithms” of the claimed invention, Osborne only generally refers to the aforementioned servers as part of the system as being “deployed,” but in no way teaches or suggests what or who performs the action of “deploy.” Applicants respectfully submit that Osborne in no way teaches or suggests the “system” being deployed, such that *the user facilities/diagnostic users* (as the “client”) specifically *downloads* any portion of the servers, and especially downloads the “databases of rules” (as the “analysis algorithms”) of the claimed invention.

For purposes of this response, even if the user “receives” the “system” including Web, Database, Application or Operations servers, there is still not teaching or suggestion by Osborne as to what or who starts or triggers a transfer of the “system” so that the user “receives” the system, and especially that the *user facilities/diagnostic users* (as the “client”) specifically *downloads* any portion of the servers, and especially downloads the “databases of rules” (as the “analysis algorithms”) of the claimed invention. Therefore, Osborne *does not teach or suggest* **the client system performing downloading the selected analysis algorithm from the analysis algorithm database** of independent Claims 1, 9 and 12.

Secondly, while the systems are indicated as being “provided to the users,” as alleged in the response to arguments, again, such comments only generally refers to the aforementioned servers as part of the system as being “provided,” but in no way teaches or suggests what or who performs the action of “providing” the “system” to the users. Applicants respectfully submit that Osborne in no way teaches or suggests the “system” being provided, such that *the user facilities/diagnostic users* (as the “client”) specifically *downloads* any portion of the servers, and especially downloads the “databases of rules” (as the “analysis algorithms”) of the claimed invention. Therefore, Osborne further *does not teach or suggest* **the client system performing downloading the selected analysis algorithm from the analysis algorithm database** of independent Claims 1, 9 and 12.

Finally, Osborne further teaches in Figure 1 that while the *user facilities/diagnostic users* (as the “client”) performs generic pattern processing and requests a pattern match for a chip ID from the central processing data facilities (as the “server”), it is the central processing data facilities that performs any further processing. For example, the Application Server in Figure 1 queries databases and processes to pattern match. Again, Applicants respectfully submit that Osborne in no way teaches or suggests the *user facilities/diagnostic users* (as the “client”) specifically *downloads* any portion of the servers, and especially downloads the “databases of rules” (as the “analysis algorithms”) to perform processing and analysis of data, as claimed.

In the instant Office action at Page 9, it is asserted that the “client can select and download data/database based on application ID, etc., and perform genotyping analysis,” as evidenced by the diagnostic architecture listed on pages 16-18 of Osborne. However, as detailed at the top of page 17 of Osborne and consistent with Figure 1 described above, the Diagnostic User Architecture initiates transfer *to central system for processing*, and in remote processing,

the Diagnostic User Architecture generates a generic pattern and generates a data format *for export to central system*. As detailed at the top of page 18 of Osborne and consistent with Figure 1 described above, the Application Server of the Central Data Processing Facility Architecture accepts genetic pattern and chip and performs genetic pattern matching *processing*. That is, Osborne still does not teach or suggest the Diagnostic User Architecture (as the “client”) specifically downloading any type of analysis algorithms to perform processing. Therefore, Osborne still *does not teach or suggest* **the client system performing downloading the selected analysis algorithm from the analysis algorithm database** of independent Claims 1, 9 and 12.

Since Osborne *fails to teach or suggest* all of the limitations in amended independent Claims 1, 9 and 12, it is respectfully submitted that *prima facie* obviousness does not exist regarding at least amended independent Claims 1, 9 and 12. Applicants respectfully submit that Claims 1, 9 and 12, and Claims 2-8, 10, 11, 13 and 14 as variously depending from Claims 1, 9 and 12, are not further rejected or objected, and are allowable. Entry of the claim amendments, reconsideration, withdrawal of the relevant claim rejections and allowance of Claims 1-14 are respectfully requested. That is, Osborne in no way teaches or suggests the *user facilities/diagnostic users* (as the “client”) specifically *downloads* any portion of the servers, and especially downloads the “databases of rules” (as the “analysis algorithms”) to perform processing and analysis of data, as claimed.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants’ attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

Applicants hereby petition for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) which may be required for entry and consideration of the present Reply.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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